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10/626,852	07/21/2003	Gary Wingett	857.0021.UI(US)	1883
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HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER TRAN, TUYETLIEN T	
			ART UNIT	PAPER NUMBER
			2179	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

ED

Office Action Summary

Application No.

10/626,852

Applicant(s)

WINGETT ET AL.

Examiner

TuyetLien (Lien) T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is responsive to the following communication: Amendment filed 2/12/2007.

This action is made final.

2. Claims 1-7, 9-37 are pending in the case. Claims 1, 12, 22-23, 28-29, 33-35 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claims 1-7, 9, 11-19, 21-29, 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Millington (Patent No. 6037942; hereinafter Millington).**

As to claim 1, Arnold teaches:

A device (e.g., see Fig. 7) comprising:

display apparatus configured to display an arrangement of icons (e.g., see Fig. 3A), the arrangement having a first portion comprising a first plurality of icons (e.g., items 301-308 in Fig. 3A) and a second portion comprising at least one icon (e.g., item 309 in Fig. 3A), wherein peripheral icons in the arrangement comprise the first plurality of icons and at least one non-

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peripheral icon in the arrangement comprises the at least one icon of the second portion (e.g., see Fig. 3A);

a highlight generator configured to highlight any one of the icons in the arrangement of icons (e.g., see [0024]);

a user input comprising a directional control configured to receive directional input indicating to which icon a highlight is to be moved and an icon selection control configured to receive icon selection input (e.g., see [0024] and Fig. 1 and Fig. 7); and

a highlight and selection control configured to change the position of the highlight from a first icon to a second icon in response to receipt of directional input (e.g., see [0024]-[0025]); to select automatically the second icon in response to receipt of directional input moving the highlight to highlighting of the second icon if the second icon is a member of the first portion (e.g., automatically select any items 301-308 by maintaining the pressure on the joystick device in the same direction for, for example, 0.5 seconds, the highlighted block is selected, see [0025]; note that the user can decrease the time period to zero to increase the speed at which data can be input, see [0025]; further note that the select a character, the joystick device is moved in the direction of the required character to highlight and select the same way as items 301-308 are selected, see [0026]).

Arnold does not expressly teach that to select the second icon in response to receipt of icon selection input when the second icon is highlighted if the second icon is a member of the second portion. However, this limitation relies on a conditional phrase and in the normal operation of Arnold the conditional's premise does not occur, and therefor the conditional statement is anticipated.

In addition, Millington teaches a device that has directional input device permits a user to select any one of the characters in sub-menu by the user moving the directional input device in

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one of the direction and then by sending a selection signal to select the letter (e.g., see Fig. 2 and col. 4 lines 53-67 – col. 5 lines 1-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implemented the feature of selecting an icon in response to the selection signal from the directional control if the icon is a member of the second portion, because Arnold suggests that the user may press a selection button to select a current highlighted icon (e.g., see [0025]) and that every block in the matrix can be used to represent characters (e.g., see [0029]); this prevents unwanted selection of menus if the non-peripheral block or icon is used to represent a character.

As to claim 12, claim 12 reflects a method (e.g., a method of selecting a character from a predetermined set of character, see page 4 left column lines 42-50) that has steps recited as claimed in claim 1; therefore is rejected under similar rationale.

As to claim 22, claim 22 is in the same context as claim 1; therefore is rejected under similar rationale.

As to claim 23, Arnold teaches:

A device (e.g., see Fig. 7) comprising:

means for producing a highlight for highlighting any one of the icons of an arrangement of icons (e.g., see [0024]), wherein the arrangement of icons comprises a plurality of peripheral icons (e.g., items 301-308 in Fig. 3A) and at least one non-peripheral icon (e.g., item 309 in Fig. 3A);

a user input means for receiving directional input for moving the highlight and for receiving icon selection input (e.g., see [0024] and Fig. 1 and Fig. 7); and

a control configured to select an icon in response to receipt of directional input highlighting the icon if the icon is a peripheral icon (e.g., automatically select any items 301-308 by maintaining the pressure on the joystick device in the same direction for, for example, 0.5 seconds, the highlighted block is selected, see [0025]; note that the user can decrease the time period to zero to increase the speed at which data can be input, see [0025]; further note that the select a character, the joystick device is moved in the direction of the required character to highlight and select the same way as items 301-308 are selected, see [0026]) and to move the highlight from one icon to another in response to receipt of directional input (e.g., see [0024] and Fig. 1 and Fig. 7).

Arnold does not expressly teach that to select the second icon in response to receipt of icon selection input when the second icon is highlighted if the second icon is a member of the second portion. However, this limitation relies on a conditional phrase and in the normal operation of Arnold the conditional's premise does not occur, and therefor the conditional statement is anticipated.

Arnold neither teach the limitation of automatically move the highlight, after selection of an icon, to a "home" icon centrally located in the arrangement of icons.

In addition, Millington teaches a device that has directional input device permits a user to select any one of the characters in sub-menu by the user moving the directional input device in one of the direction and then by sending a selection signal to select the letter (e.g., see Fig. 2 and col. 4 lines 53-67 – col. 5 lines 1-6) and that to automatically reactivating, after selection of an icon, a "home" icon centrally located in the arrangement of icons (e.g., after an icon is selected, the start position 60 is then reactivated; note that the position 60 is centrally located in the arrangement of icons see Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implemented the feature of selecting an icon in response to the selection signal from the directional control if the icon is a member of the second portion and to automatically moving the highlight to the home position after selection of an icon, because Arnold suggests that the user may press a selection button to select a current highlighted icon (e.g., see [0025]) and that every block in the matrix can be used to represent characters (e.g., see [0029]); this prevents unwanted selection of menus if the non-peripheral block or icon is used to represent a character and to allow a user to rapidly select a desired symbol from a large array of symbols with a minimal number of keystrokes.

As to claim 28, Arnold teaches:

A method of selecting a character from a predetermined set of character, see page 4 left column lines 42-50) comprising:

displaying an arrangement of icons (e.g., see Fig. 3A), the arrangement having a first portion comprising a first plurality of icons (e.g., items 301-308 in Fig. 3A) and a second portion comprising at least one icon (e.g., item 309 in Fig. 3A), wherein the icons comprising the arrangement maintain constant relative positions during icon selection operations (e.g., note that items 301-308 have a constant relative positions with the item 309 during icon selection operations, see Fig. 3A);

generating a highlight for user in highlighting one icon at a time in the arrangement of icons (e.g., see [0024]);

receiving at least one of directional input indicating to which icon the highlight is to be moved and icon selection input (e.g., see [0024] and Fig. 1 and Fig. 7); and

selecting an icon in response to highlighting of the icon if the icon is a member of the first portion (e.g., automatically select any items 301-308 by maintaining the pressure on the joystick

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device in the same direction for, for example, 0.5 seconds, the highlighted block is selected, see [0025]; note that the user can decrease the time period to zero to increase the speed at which data can be input, see [0025]; further note that the select a character, the joystick device is moved in the direction of the required character to highlight and select the same way as items 301-308 are selected, see [0026]) and to move the highlight from one icon to another in response to receipt of directional input (e.g., see [0024] and Fig. 1 and Fig. 7);

Arnold does not expressly teach that in response to receipt of icon selection input entered the icon has been highlighted if the icon is a member of the second portion. However, this limitation relies on a conditional phrase and in the normal operation of Arnold the conditional's premise does not occur, and therefor the conditional statement is anticipated.

In addition, Millington teaches a device that has directional input device permits a user to select any one of the characters in sub-menu by the user moving the directional input device in one of the direction and then by sending a selection signal to select the letter (e.g., see Fig. 2 and col. 4 lines 53-67 – col. 5 lines 1-6). Thus, combining Arnold and Millington would meet the claimed limitations for the same reasons as discussed with respect to claim 1 above.

As to claim 29, Arnold teaches:

A device comprising (e.g., see Fig. 7):

a display (e.g., see Fig. 7);

means for producing an arrangement of icons on the display (e.g., see Fig. 5 item 502);

a control input configured to select an icon in response to the user input (e.g., see [0024] and Fig. 1 and Fig. 7); and to move the arrangement of icons in response to the user input (e.g., see [0024] and Fig. 1 and Figs. 3A-3I), wherein as the arrangement of icons moves, the icons comprising the arrangement maintain constant relative positions for so long as the icons comprising the arrangement continue to be displayed (e.g., note that items 301-308 have a

constant relative positions with the item 309 during icon selection operations, see Fig. 3A; further note that the constant relative position is maintained as the arrangement of icons go to sub-menu; see Figs. 3A-3I).

As to claim 33, claim 33 reflects a memory storing a program, the program executable by digital processing apparatus (e.g., see Fig. 5) to perform the steps recited as claimed in claim 1; therefore is rejected under similar rationale.

As to claim 34, claim 34 reflects a user interface (e.g., see Figs. 5 and 7) that comprises means to perform the steps recited as claimed in claim 1; therefore is rejected under similar rationale.

As to claim 35, claim 35 reflects device (e.g., see Figs. 5 and 7) that performs the steps recited as claimed in claim 28; therefore is rejected under similar rationale.

As to claims 2, 13, and 27, Arnold further teaches the icons comprising the arrangement maintain constant relative positions during icon selection operations (e.g., note that items 301-308 have a constant relative positions with the item 309 during icon selection operations, see Fig. 3A).

As to claims 3 and 32, Arnold further teaches wherein the highlight and selection control is configured to change the position of the highlight from one icon to another in response to each user actuation of the directional control (e.g., see [0024]-[0025] and Fig. 1 and Fig. 7).

As to claims 4, 14, and 24, Millington further teaches that to automatically reactivating, after selection of an icon, a "home" icon centrally located in the arrangement of icons (e.g., after an icon is selected, the start position 60 is then reactivated; note that the position 60 is centrally

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located in the arrangement of icons see Fig. 2). Thus, combining Arnold and Millington would meet the claimed limitations for the same reasons as discussed with respect to claim 23 above.

As to claims 5, 15, and 25, Arnold and Millington further teach wherein the arrangement of icons comprises an N row by M column array of icons (e.g., see Arnold Figs. 3A-3I) and the "home" icon is located in at least one of central row(s) of the array and/or the central column(s) of the array (e.g., see Millington Fig. 2). Thus, combining Arnold and Millington would meet the claimed limitations for the same reasons as discussed with respect to claim 23 above.

As to claim 6, Arnold further teaches the arrangement of icons comprises an N row by M column array of icons (e.g., see Figs. 3A-3I); the directional control configured to receive directional input indicating movement of the highlight in at least one direction of four directions way movement of the highlight to an icon in an adjacent row but the same column or in an adjacent column but the same row (e.g., see item 503 in Figs. 5, 3A-3I, and [0025]-[0026]; many input device can be used as shown in Fig. 7), and the first plurality of icons are either in a first row and last row of the array or are in a first column and last column of the array (e.g., see items 301-308 in Fig. 3A).

As to claim 7, Arnold further teaches the arrangement of icons comprises an N row by M column array of icons (e.g., see Figs. 3A-3I), the directional control configured to receive directional input indicating movement of the highlight in at least one direction of multiple directions to an adjacent icon (e.g., see item 503 in Figs. 5, 3A-3I, and [0025]-[0026]; many input device can be used as shown in Fig. 7), and the first plurality of icons are those in a first row and last row of the array or are in a first column and last column of the array (e.g., see items 301-308 in Fig. 3A).

As to claim 16, Arnold further teaches the arrangement of icons comprises an N row by M column array of icons (e.g., see Figs. 3A-3I), and the first plurality of icons are either in a first row and last row of the array or are in a first column and last column of the array (e.g., see items 301-308 in Fig. 3A).

As to claim 17, Arnold further teaches the arrangement of icons comprises an N row by M column array of icons (e.g., see Figs. 3A-3I), and the first plurality of icons are those in a first row and last row of the array or are in a first column and last column of the array (e.g., see items 301-308 in Fig. 3A).

As to claim 18, Arnold further teaches displaying the arrangement of icons and displaying a highlight on the display to highlight an icon (e.g., see Figs. 3A-3I and [0025]-[0026]).

As to claims 9 and 19, Arnold further teaches means for determining from the identity of the preceding selected icon(s) of an input sequence those icons which will not be selected for the remainder of the input sequence and removing them from the display (e.g., see Figs. 3A-3I).

As to claims 11 and 31, Arnold further teaches the arrangement of icons represents a 3 column keyboard or keyboard portion or a 3 row keyboard or keyboard portion with each icon representing a key of the keyboard or keyboard portion (e.g., see Figs. 3A-3I).

As to claim 21, Arnold further teaches a mobile communication device comprising an input device incorporating the disclose invention (e.g., see Fig. 7).

As to claim 26, Arnold further teaches wherein the control means is arranged to select first ones of the arrangement of icons automatically when they are highlighted (e.g.,

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automatically select any items 301-308 by maintaining the pressure on the joystick device in the same direction for; for example, 0.5 seconds, the highlighted block is selected, see [0025]; note that the user can decrease the time period to zero to increase the speed at which data can be input, see [0025]; further note that the select a character, the joystick device is moved in the direction of the required character to highlight and select the same way as items 301-308 are selected, see [0026]) and to move the highlight from one icon to another in response to receipt of directional input (e.g., see [0024] and Fig. 1 and Fig. 7).

As to claim 36, Arnold further teaches where the display apparatus is further configured to move the arrangement of icons in dependence on which icon is selected (e.g., see Figs. 3A-3I), wherein when moving the arrangement the icons comprising the arrangement maintain constant relative positions while the icons comprising the arrangement are displayed (e.g., note that items 301-308 have a constant relative positions with the item 309 during icon selection operations, see Fig. 3A; further note that the constant relative position is maintained as the arrangement of icons go to sub-menu; see Figs. 3A-3I).

As to claim 37, Arnold further teaches when a particular icon is selected, the display apparatus is further configured to discontinue displaying certain icons; to continue displaying other icons; and to display further icons that were not displayed prior to selection of the particular icons (e.g., see Figs. 3A-3I), where in continuing to display the other icons, the display apparatus maintains the other icons in constant relative positions (e.g., note that items 301-308 have a constant relative positions with the item 309 during icon selection operations, see Fig. 3A; further note that the constant relative position is maintained as the arrangement of icons go to sub-menu; see Figs. 3A-3I).

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5. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Millington and further in view of Koze et al (EP Pub No EP1022649 A1, hereinafter Koze).

As to claims 10 and 20, Arnold and Millington teach the limitation of claims 1 and 10 for the reasons as discussed with respect to claims 1 and 10 above. However, Arnold and Millington do not expressly teach means for selecting different alphanumeric characters associated with a particular icon in response to the repetitive selection of an icon a different number of times. Koze, though, teaches means for selecting different alphanumeric characters in response to the repetitive selection of an icon a different number of times (e.g., see [0038] in page 4).

It would have been obvious to one of ordinary skill in the art, having the teachings of Arnold and Millington and Koze before him at the time the invention was made to have utilized the method of character input as taught by Koze to the user input device as taught by Arnold and Millington to enable efficient key input while decreasing the moving distance of the cursor between key positions and thus increase text entry speed (e.g., see Koze [0009] in page 2).

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Millington further in view of Chew et al (Pub No US 2004/0001105 A1; hereinafter Chew).

As to claim 30, Arnold and Millington teach the limitation of claim 29 for the reasons as discussed with respect to claim 29 above. However, Arnold and Millington do not expressly teach the control means is arranged to scroll an arrangement of icons across the display in response to the user input. Chew, though, teaches wherein the control means is arranged to

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scroll an arrangement of icons across the display in response to the user input (e.g., see Fig. 6A-6B).

It would have been obvious to one of ordinary skill in the art, having the teachings of Arnold and Millington and Chew before him at the time the invention was made to have utilized the computing device as taught by Chew to the input device as taught by Arnold and Millington to speed up input on a telephone with a space limited keyboard (e.g., see Chew [0006]).

Response to Arguments

7. Applicant's arguments with respect to claims 1-7, 9-37 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Examiner's note: Examiner has cited particular columns, line numbers, and figures in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teaching of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TuyetLien (Lien) T. Tran whose telephone number is 571-270-1033. The examiner can normally be reached on Mon-Friday: 7:30 - 5:00 (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T.T
4/13/2007

Lien Tran
Examiner
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BA HUYNH
PRIMARY EXAMINER